

**What is claimed is:**

1           1. A method for introducing micro-volume liquid  
2 comprising:

3           providing a multi-channel inkjet print head  
4           including a cartridge and a nozzle plate with a  
5           plurality of nozzles, wherein the cartridge  
6           includes a plurality of channels, communicating  
7           with the nozzles on the nozzle plate, and a  
8           plurality of openings located at the channels;

9           contacting the nozzle plate with a buffer;

10          introducing the buffer into the channels via the  
11          nozzles by providing a pressure; and

12          introducing reagents into the channels via the  
13          openings.

1           2. The method as claimed in claim 1, wherein the  
2 buffer excludes biomolecules therein.

1           3. The method as claimed in claim 1, further  
2 comprising:

3           after introducing the buffer into the channels,  
4           removing part of the buffer from the channels.

1           4. The method as claimed in claim 3, wherein the  
2 volume of the removed buffer is not less than the volume  
3 of the introduced reagents.

1           5. The method as claimed in claim 1, wherein the  
2 pressure is positive so that the buffer is pushed into  
3 the channels via the nozzles.

1           6.    The method as claimed in claim 1, wherein the  
2    pressure is negative so that the buffer is drawn into the  
3    channels via the openings.

1           7.    The method as claimed in claim 6, wherein the  
2    negative pressure is generated by vacuuming the openings.

1           8.    The method as claimed in claim 1, wherein the  
2    reagents include biomolecules therein, and the  
3    biomolecules are oligonucleotides, peptides, proteins, or  
4    derivatives thereof.

1           9.    The method as claimed in claim 1, wherein the  
2    reagents are introduced into the channels by pipettes.

1           10.   An apparatus for introducing micro-volume  
2    liquid comprising:

3           a    multi-channel inkjet print head including  
4                cartridge and a nozzle plate with a plurality  
5                of nozzles, wherein the cartridge includes a  
6                plurality of channels, communicating with the  
7                nozzles on the nozzle plate, and a plurality of  
8                openings located at the channels;

9           a    container for receiving a buffer, wherein the  
10               buffer and the nozzle plate are in contact;

11           a    pressure supply for providing pressure to the  
12                multi-channel inkjet print head so that the  
13                buffer is introduced into the channels; and

14           an injector, disposed in the channels, for receiving  
15                a reagent therein and introducing the reagent  
16                into the channels via the openings.

1           11. The apparatus as claimed in claim 10, further  
2 comprising:

3           an absorber, disposed in the channels, for removing  
4           a predetermined amount of the buffer from the  
5           channels.

1           12. The apparatus as claimed in claim 10, wherein  
2 the pressure supply communicates with the container, and  
3 provides a positive pressure to the container so that the  
4 buffer is pushed into the channels.

1           13. The apparatus as claimed in claim 10, wherein  
2 the pressure supply communicates with the openings, and  
3 provides a negative pressure to the channels so that the  
4 buffer is drawn into the channels.

1           14. The apparatus as claimed in claim 10, wherein  
2 the reagents includes biomolecules therein, and the  
3 biomolecules are oligonucleotides, peptides, proteins, or  
4 derivatives thereof.

1           15. The apparatus as claimed in claim 10, wherein  
2 the buffer excludes the biomolecules.

1           16. The apparatus as claimed in claim 10, wherein  
2 the injector is a pipette.